

AMENDMENTS TO THE CLAIMS

1-90. (Canceled).

91. (Currently Amended) A method of applying a radial force against a surface of a passageway with an expandable device, comprising:

providing an expandable device with a plurality of cells, at least one cell capable of being expanded between a stable contracted state and a stable expanded state ~~without any stable configurations between the stable contracted state and the stable expanded state~~; and

radially expanding the expandable device against a surface of the passageway;

wherein each cell comprises a generally longitudinal wave-like first member and a generally longitudinal wave-like second member, the first and second members being generally in phase when the cell is in an unexpanded state and generally out of phase when the cell is in an expanded state.

92. (Currently Amended) The method as recited in claim 91, wherein the step of radially expanding comprises expanding the plurality of cells without substantial axial shortening of the expandable device.

93. (Previously Presented) The method as recited in claim 91, wherein the expandable device comprises a tubular member.

94. (Previously Presented) The method as recited in claim 91, wherein the expandable device comprises a liner.

95. (Previously Presented) The method as recited in claim 91, wherein the expandable device comprises thick struts coupled to thin struts.

96-112. (Canceled)

113. (Currently Amended) A method of stabilizing an unsupported section of a passageway, comprising:

providing an expandable device having one or more cells, each of the cells comprising first and second arcuate members;

placing the device at a position in the passageway while in a first stable state;

applying a radially outward force to the expandable device; and

expanding the one or more cells to a transition point defining a geometry of the one or more cells at which no additional force is necessary to further expand the one or more cells; and

permitting the one or more cells to continue to expand beyond the transition point without the application of additional force;

wherein at least a portion of the first arcuate member is generally concave before the one or more cells has been expanded and at least a portion the first arcuate member is generally convex after the one or more cells has been expanded beyond the transition point.

114. (Previously Presented) The method as recited in claim 113, further comprising attaching a wrapping to the outer surface of the device.

115. (Previously Presented) The method as recited in claim 114, wherein attaching comprises attaching an expandable material.

116. (Previously Presented) The method as recited in claim 113, further comprising applying a deformable material to the outer surface of the device.

117. (Previously Presented) The method as recited in claim 116, wherein applying comprises applying an elastomeric material.

118. (Previously Presented) The method as recited in claim 113, further comprising expanding the device to a first stable size and a second stable size.

119. (Currently Amended) A method for installing a liner within a tubular passageway, comprising:

providing an expandable device with a plurality of bistable cells, each of the bistable cells comprising first and second arcuate members, each cell capable of assuming a stable collapsed configuration in which the first and second arcuate members are in phase and a stable expanded configuration in which the first and second arcuate members are out of phase ~~without any stable configurations between the stable-collapsed configuration and the stable-expanded configuration,~~ the expandable device having a generally tubular shape; and

surrounding the expandable device with an expandable liner element attached to an outer surface of the device.

120. (Previously Presented) The method as recited in claim 119, further comprising:
placing the expandable device at a position within the tubular passageway while
in a first stable state; and
expanding the expandable device into a second stable state to hold the liner
element against an inner diameter of the tubular passageway.
121. (Previously Presented) The method as recited in claim 119, wherein the first
arcuate member comprises a thin strut and the second arcuate member is a thick strut.
122. (Currently Amended) A method of isolating a portion of a passageway,
comprising:
inserting within the passageway an expandable multistable device formed by one
or more of cells that permit the expandable device to be selectively actuated between a
contracted state and at least one expanded state, each of the cells comprising ~~first and
second arcuate members~~ first and second wave-like portions;
expanding the one or more cells from a stable collapsed configuration in which
the first and second wave-like portions are in phase to a stable expanded configuration, in
which the first and second wave-like portions are out of phase, wherein there are no
stable configurations between the stable collapsed configuration and the stable expanded
configuration; and
isolating a portion of the passageway with the expandable device.
- 123-126. (Canceled)
127. (Currently Amended) The method as recited in claim 122, wherein the first and
second arcuate members ~~each comprise~~ comprise a wave shape in the contracted state.
128. (Currently Amended) The method as recited in claim 122, wherein the step of
expanding occurs without substantial axial shortening of the expandable multistable device.
129. (Previously Presented) The method as recited in claim 122, wherein the first
arcuate member is more flexible than the second arcuate member.
130. (Currently Amended) A method of expanding an expandable device in a passage
way, comprising:

providing an expandable device having at least one cell, the at least one cell comprising first and second ~~areuate~~ members, at least a portion of the second areuate member(s) being more pliable than the first areuate member(s);

positioning the expandable device in a passage way;

applying a radially outward force to the expandable device;

expanding the at least one cell to a transition point defining a geometry of the at least one cell beyond which no additional force is needed to further expand the least one cell, at least a portion of the at least one cell moving between a generally concave state and a generally convex state at the transition point; and

permitting the at least one cell to continue to expand beyond the transition point without the application of additional force.

131. (Currently Amended) The method as recited in claim 130, wherein each of the second ~~areuate~~ members comprise a wave shape in the first stable position.

132. (Previously Presented) The method as recited in Claim 130, wherein the step of expanding comprises expanding the expandable device radially outward.

133. (Previously Presented) The method as recited in Claim 130, wherein the expandable device is a medical device.

134. (Previously Presented) The method as recited in Claim 91, further comprising inserting a portion of the expandable device into a body of a patient.

135. (Previously Presented) The method as recited in Claim 113, further comprising inserting a portion of the expandable device into a body of a patient.

136. (Previously Presented) The method as recited in Claim 119, further comprising inserting a portion of the expandable device into a body of a patient.

137. (Previously Presented) The method as recited in Claim 122, wherein the passageway is in a body of a patient.

138. (Previously Presented) The method as recited in Claim 130, further comprising inserting a portion of the expandable device into a body of a patient.

139. (Previously Presented) The method as recited in Claim 113, wherein the device has a generally tubular shape.

140. (Previously Presented) The method as recited in Claim 119, further comprising locating multiple bistable devices in the passageway such that the ends of the adjacent bistable devices overlap and form a continuation of the liner element against the inner diameter of the tubular passageway.

141. (Previously Presented) The method as recited in Claim 113, wherein the device is a single unit cell device.

142. (Canceled)

143. (New) The method as recited in Claim 91, wherein at least one cell is capable of being expanded between a stable contracted state and a stable expanded state without any stable configurations between the stable contracted state and the stable expanded state.

144. (New) The method as recited in Claim 119, wherein each cell is capable of assuming a stable collapsed configuration and a stable expanded configuration without any stable configurations between the stable collapsed configuration and the stable expanded configuration.

145. (New) The method as recited in Claim 130, wherein at least one of the first and second members comprises an arcuate shape.

146. (New) The method as recited in Claim 145, wherein at least one second member comprises a plurality of generally rigid interconnected members.

147. (New) The method as recited in Claim 130, wherein at least one second member comprises one or more hinges.

148. (New) The method as recited in Claim 130, wherein at least one second member comprises three generally linear portions, the three generally linear portions cumulatively forming either a generally concave shape or a generally convex shape.

149. (New) The method as recited in Claim 130, wherein at least one second member comprises a plurality of generally rigid interconnected members.